

ABSTRACT

A connector seal device for connecting a branch pipe to a transverse opening of a main pipe. The connector seal device may include a hollow elastomer insert composed in part of a first material. The connector seal device may include a pipe union of a second material which is harder than the first material. The elastomer insert may include a flexible support collar, a sealing wall region with an inside surface tapered in an insertion direction and having first locking ring zones, and an outside surface adapted to fit a diameter of the transverse opening. The pipe union may include an engagement end with an outside surface tapered in the insertion direction and having second locking ring zones and being adapted to cooperate with the inside surface of the elastomer insert. The pipe union may also include a socket end adapted to cooperate with the branch pipe. When the elastomer insert is inserted into the transverse opening and the pipe union is inserted into the elastomer insert, the first and second locking ring zones engage in the manner of ratchet teeth and the elastomer insert is expanded and pressed further against the transverse opening through the continued displacement of the pipe union in the insertion direction.